

**Commonwealth of Kentucky**  
**Division for Air Quality**  
***PERMIT STATEMENT OF BASIS***

TITLE V RENEWAL DRAFT PERMIT NO. V-05-073

HAWLEY PRODUCTS, INC.

PADUCAH, KY

April 18, 2006

RALPH GOSNEY, P.E., REVIEWER

SOURCE I.D. #: 21-145-00081

SOURCE A.I. #: 3045

ACTIVITY #: APE20040002

**SOURCE DESCRIPTION:**

Hawley Products, Inc. (Hawley) produces paper speaker cones. The first step in the manufacturing process is mixing of paper slurry. Paper speaker cones are molded from the slurry and then dried. Hawley uses both electric and natural gas cone dryers. The cones are spray and dip coated to enhance the appearance and properties of the paper. The coated cones are dried by the indirect fired cone treatment oven. Cloth is treated with chemicals to make it rigid. The cloth is dried in the indirect fired cloth treatment oven. Cloth and/or a gasket is attached to the edge of the larger cone body opening. Hawley trims the cone body and cloth prior to adhering them together.

The source consists of the following permitted significant emission units:

- (a) One (1) paper cone treatment oven, identified as EP01 and constructed in 1984, with a maximum cone processing rate of 667 pieces per hour, and exhausting to one (1) stack P1;
- (b) One (1) wetlook spray booth, identified as EP02 and constructed in 1984, with a maximum capacity of 0.9 gallons coating per hour; and
- (c) One (1) cloth treatment oven, identified as EP03 and constructed in 1984, with a maximum cloth treatment rate of 400 yards per hour.

**Insignificant Activities:**

The source consists of the following insignificant activities, as defined in 401 KAR 52:020, Section 6:

- (a) One (1) natural gas fired boiler, constructed in 1990, with a maximum heat input rate of 1.68 million British thermal units per hour;
- (b) One (1) natural gas fired boiler, constructed in 1984, with a maximum heat input rate of 1.512 million British thermal units per hour;

- (c) One (1) storage tank, with a maximum capacity of 8,000 gallons, constructed in 1994 and storing acetone blend;
- (d) One (1) storage tank, with a maximum capacity of 8,000 gallons, constructed in 1994 and storing methanol;
- (e) Four (4) direct fired natural gas cone dryers, with a combined maximum heat input rate of 0.24 million British thermal units per hour;
- (f) Three (3) direct fired natural gas cone dryers, with a combined maximum heat input rate of 0.3 million British thermal units per hour; and
- (g) One (1) electric oven.

The source removed the wetlook spray booth #2, identified as EP 06, in 2002. Therefore, this unit is not included in this permit renewal.

The potential to emit (as defined in 401 KAR 52:001, Section 1 (56)) of volatile organic compounds (VOC) is greater than one-hundred (100) tons per year. Therefore, the source is a major source and is subject to the provisions of 401 KAR 52:020.

This permit is the renewed issuance of the source's Title V operating permit.

**COMMENTS:**

**Type of control and efficiency:**

None

**Emission factors and their source:**

AP-42, Chapter 1.4, Tables 1.4-1, 2 and 3 were used to determine the natural gas combustion emissions from the boilers and cone dryers. The process emissions from the cone oven, cloth oven and electric oven were determined based on material balance. The emissions from the wetlook spray booth are based on the MSDS sheets and material balance for the coating. Tank emissions were determined using TANKS version 4.0.9d.

**Existing Approvals:**

*Title V Permit No. V-99-006, issued on August 4, 1999*

This permit was the first source-wide air quality permit for this source. The permit specified terms and conditions for the operation of the speaker cone manufacturing source.

### **Applicable Regulations:**

(a) *401 KAR 59:010, New process operations*

Pursuant to 401 KAR 59:010, Section 1, the requirements of this rule apply to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates in 401 KAR Chapter 59, commenced on or after July 2, 1975. The requirements of this rule are included in the permit for the dip tanks associated with cone treatment ovens and the wetlook spray booth.

Mass Emission Limit pursuant to 401 KAR 59:010 Section 3(2): Particulate matter emissions shall not exceed:  $3.59 \times (\text{Tons Processed})^{0.62}$  lbs/hr for (Tons Processed) less than 30 tons per hour. For process weight rates of 1,000 pounds (0.5 tons) or less, the allowable particulate emission rate shall not exceed 2.34 pounds per hour.

(b) *401 KAR 59:015, New indirect heat exchangers*

Pursuant to 401 KAR 59:015, Section 1, the requirements of this rule apply to each indirect heat exchanger having a heat input capacity of more than one (1) million BTU per hour and that commenced on or after the applicable classification date defined in Section 2 (3) of the rule. The maximum heat input capacity of the two natural gas fired boilers is greater than the rule applicability threshold (1.68 mmBTU/hr and 1.512 mmBTU/hr). Therefore, 401 KAR 59:015 is an applicable rule and is included in the permit. Consistent with the determination made by KDAQ during the initial TV permit review, these two boilers are considered as insignificant activities.

(c) *401 KAR 63:020, Potentially hazardous matter or toxic substances*

The requirements of this rule are addressed in Section D of the permit.

### **Non-Applicable Regulations:**

(a) *The requirements of 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, are not included in the permit for the two (2) boilers because the maximum heat input capacity of each boiler is less than the rule applicability threshold of 10 MMBtu/hr.

(b) *The requirements of 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels*, are not included in the permit for 8,000 gallon methanol (i.e., volatile organic liquid) storage tank because the storage capacity of the tank is less than the rule applicability threshold of 19,812 gallons. The 8,000 gallon acetone storage tank is not subject to this rule because, pursuant to 401KAR 59:001, Section 1(126) and 40 CFR 51.100(s)(1), acetone is not considered as a volatile organic compound.

(c) *The requirements of 40 CFR 64, Compliance Assurance Monitoring*, are not included in the permit because Hawley Products, Inc. does not operate a pollutant-specific emission unit that has controls.

- (d) Pursuant to 401 KAR 59:210, Section 2, the requirements of 401 KAR 59:210, *New Fabric, Vinyl and Paper Surface Coating Operations*, apply to each coating line for fabric, vinyl, or paper. The source does not perform any fabric or vinyl coating. Pursuant to 401 KAR 59:210, Section 1, "paper coating" means saturation or the application of a uniform layer of material across the entire width of a web of paper, pressure sensitive tapes regardless of substrate, related web coating processes on plastic film such as typewriter ribbons, photographic film, magnetic tape, functional films, and decorative coatings on metal foil such as gift wrap and packaging, but does not include the printing of paper. The source applies coating to individual speaker cones and does not apply coating across the entire width of a web (i.e., continuous roll) of paper. Therefore, the requirements of this rule are not included in the permit. This determination is consistent with that made by KDAQ during the initial TV permit review.
- (e) The requirements of New Source Performance Standard, (40 CFR 60.740, Subpart VVV) *Standards of Performance for Polymeric Coating of Supporting Substrates* are not included in the permit since the source does not have any coating operation or coating mix preparation equipment used to prepare coatings for the polymeric coating of supporting substrates.
- (f) Pursuant to 40 CFR 63.4281 (a), the requirements of 40 CFR 63, Subpart OOOO, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Printing, Coating, and Dyeing of Fabrics and Other Textiles*, apply to the printing, coating, slashing, dyeing or finishing of fabric and other textiles. The permittee has requested voluntary permit emission limits of less than 10 tons per year (tpy) of a single hazardous air pollutant (HAP) and less than 25 tpy of combined HAPs. Compliance with these permit limits shall make the requirements of 401 KAR 52:020, Title V permits, not applicable to this source.
- (g) The requirements of 40 CFR 63, Subpart DDDDD, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters*, are not included in the permit for the two (2) boilers at the source. These units are considered as existing small gaseous fuel units, as defined by 40 CFR 63.7575 (i.e., each unit's heat input rating is less than or equal to 10 million Btu per hour). This notwithstanding, there are no 40 CFR 63, Subpart DDDDD requirements included in the permit since this is not a major source of HAP emissions.
- (h) Pursuant to 40 CFR 63.3290, the requirements of 40 CFR 63, Subpart JJJJ, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Paper and Other Web Coating*, apply to each new and existing facility that is a major source of HAP, as defined in 40 CFR 63.2, at which web coating lines are operated. Pursuant to 40 CFR 63.3310, web coating line means any number of work stations, of which one or more applies a continuous layer of coating material across the entire width or any portion of the width of a web substrate, and any associated curing/drying equipment between an unwind or feed station and a rewind or cutting station. The source applies coating to individual speaker cones and does not apply coating across the entire width of web substrate. Therefore, this source is not an affected source as defined in the rule. Additionally, this facility is not a major source of HAP emissions. Therefore, the requirements of this rule are not included in the permit.
- (i) There are no other NESHAPs (40 CFR 63 and 401 KAR 63) applicable to this area source for HAP emissions, as such is defined at 40 CFR 63.2.

## **Source Status**

- (a) This existing source is a minor stationary source for PSD review because this type of operation is not one of the twenty-eight (28) listed source categories under 401 KAR 51:017 and no attainment pollutant is emitted at a rate of 250 tons per year or more.
- (b) McCracken County is designated as attainment for the 8-hour ozone standard. No criteria pollutant is emitted at a rate of 250 tons per year or more. Therefore, the existing source is not a major stationary source under prevention of significant deterioration of air quality (PSD), 401 KAR 51:017.

## **EMISSION AND OPERATING CAPS DESCRIPTION:**

Hawley Products has requested voluntary permit emission limits of less than 10 tons per year (tpy) of a single hazardous air pollutant (HAP) and less than 25 tpy of combined HAPs. Compliance with these permit limits shall make the requirements of 40 CFR 63 for major sources of HAP emissions, as defined at 40 CFR 63.2, not applicable, including the requirements of 40 CFR 63, Subpart OOOO as explained above. The usage rate of the raw materials at the facility shall be restricted such that the stated HAP emission limits are maintained.

## **PERIODIC MONITORING:**

The permittee shall perform weekly monitoring and maintenance of material usage records in order to compute the single and combined HAP emission rates on a weekly and twelve (12) consecutive month basis. The permittee also shall visually check for emissions from the cone treatment oven, EP 01(02), and wetlook spray booth, EP 02 (04), on a weekly basis.

## **OPERATIONAL FLEXIBILITY:**

Hawley Products is not restricted as to hours of operation or quantity of product produced while remaining within the emission caps specified above.

## **CREDIBLE EVIDENCE:**

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.